

AR-1

November 1971

EOI Study Group

1. Present plans call for a near-real-time Electro Optical Imagery system to become operational in FY 1976. This highly responsive photo collection system promises to strengthen considerably the accuracy and relevance of all-source intelligence production. We are presented with the opportunity and the challenge to develop the best ways in which to integrate this new capability with other resources of the intelligence production function.

2. Although EOI will not be operational until 1976, the time is now at hand for intensive study and detailed planning to ensure effective integration of its resources with the other resources available to the intelligence community. To carry out these responsibilities, an EOI Study Group is hereby established. This Group will be the focal point for continuous, full-time evaluation and study of the interfaces between the EOI system, the production offices, and the community.

3. The EOI Study Group will work within the framework of two basic assumptions made on existing procedures:

(a) That NPIC will be responsible, as a service of common concern, for the first phase exploitation of EOI.

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(b) That COMIREX will be responsible for general management, creation, and coordination of target decks for use in targeting EOI collection, and with providing exploitation guidance to NPIC and other photointerpretation resources.

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4. Some of the problems and operational challenges posed by EOI cannot be fully appreciated and properly studied until the specific design specifications of the project and its facilities are finalized; others require management decisions to be made at very early stages of the project.

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5. Two high priority problems which require immediate consideration are:

(a) A review of the exploitation functions to be performed at the EOI processing facility, the adequacy of the planned facilities, space requirements, and the numbers of processing and production personnel to be accommodated at the facility. Guidance on this question must be furnished by 1 February 1972.

(b) An in-depth study to classify the various special and general tasks that will be placed on the system. This study, to be done in conjunction with COMIREX, would include guidance on distribution of targets, collection tasking, processing, dissemination and production, and the varieties of software needed to support the system.

6. The EOI Study Group must also consider a broad range of administrative and functional issues which need be thoroughly thought out and decided by the time the EOI system is operational. These include:

(a) Tasking procedures.

(b) Integration of ^{the product that is} EOI with other collection systems such as COMINT and ELINT.

(c) Relation of NPIC and departmental exploitation and interpretation units such as IAS to ^{the} EOI processing ^{and interpretation activities} ~~facility~~.

(d) Relation of EOI imagery to daily intelligence and research function and the integration of EOI imagery.

(e) Examine the applicability of analytical techniques such as sampling procedures, statistical methods, modelling techniques and simulation to the production process, utilizing as necessary assistance from external research agencies.

(f) The community-wide aspects of EOI tasking, processing, dissemination, and initial exploitation as a service of common concern.

*What about
the new system?*

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7. Attached at Annex A are a list of specific topics for which thorough investigation and study are required before EOI is operational. The timing and the phasing of these topics will vary according to the progress of the EOI project and the specific decisions made regarding fundamental operating procedures and responsibilities. A number of the topics transcend exclusive Directorate of Intelligence interests and will ultimately require community-wide consideration and acceptance. Some can be handled through existing machinery, such as COMIREX; others may require the creation of ad hoc interagency committees.

8. Attached at Annex B are some considerations regarding the staffing of the EOI Study Group and the representation required from the Directorate of Intelligence as well as the Directorate of Science and Technology.

Attachments:

Annex A
Annex B

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ANNEX A

EOI Study Group Topics

1. The following listing of topics that would be considered by a DDI EOI Study Group is not presented as being either all inclusive or mutually exclusive. The need for some of the suggested study topics may be eliminated as basic administrative and management decisions are made. Other problem areas may arise that will not be identifiable until we approach closer to the time when EOI becomes operational.

2. Some of the study topics are obviously of both community and Directorate concern. They may be worked out independently by the Study Group and at the appropriate time submitted to interagency groups or the community for coordination; or they may be Study Group contributions to planning studies prepared by COMIREX or NPIC.

3. The topics are not presented in order of priority or sequence of investigation.

a. Evaluate the targeting strategies and basic guidelines for regularized system coverage by EOI including classification of targets, frequency of coverage, and relation to capacity of the system.

b. Examine alternative rules and procedures for ad hoc tasking of the system and the impact of such intervention on regularized collection.

c. Assess the content and standard operating procedures for first phase exploitation by NPIC and the allocation of responsibilities for current intelligence exploitation, and non-time dominated (3rd phase) exploitation.

d. Assist in establishing Agency and community guidelines and procedures for use of the EOI system and access to its product.

e. Assess detailed personnel requirements for photointerpretation and reporting functions at the processing center. This would include consideration of such questions as inter-Agency representation and the need for area and functional specialists in addition to photo interpreters.

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f. Consider the relationship of existing departmental units--(IAS) DIA--to both NPIC and EOI in terms of readout and analysis responsibilities.

g. Assist in the formulation of ground rules for the centralized tasking of an EOI system and the relation of national intelligence interests to those of departmental units as well as military field and tactical commands.

h. Evaluate the projected day-to-day data flows and impact of EOI on the following specific responsibilities and determine if procedural changes are needed:

- (1) Warnings/Indications
- (2) Military Analysis
- (3) Crisis Management
- (4) Current Intelligence
- (5) Target Surveillance and Activity Analysis
- (6) Monitoring of Arms Limitation or Disarmament Agreements

i. Conduct studies to assist COMIREX in projecting targeting requirements for each of the functions discussed in paragraph 3. h.

j. Conduct studies to determine the adequacy of current national indications lists in relation to EOI capabilities and, if necessary, study the feasibility of unique indications signatures applicable to imagery holdings.

k. Examine alternative types and formats for reporting EOI-derived intelligence, including frequency, and dissemination controls.

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l. Evaluate procedures for community coordination of EOI-derived intelligence and consider the question of administrative responsibility for reporting the EOI product.

m. Examine support information and data requirements of the processing facility.

n. Survey Directorate and Agency capabilities for support of the EOI Study Group.

o. Determine the need for support from external research agencies in such matters as systems analysis, sampling procedures, statistical methods, modelling techniques, and simulation.

p. Assess procedures for the integration of EOI information with other major collection systems.

q. Determine the need for modification of DDI working and production procedures in relation to the EOI system.

r. Consider the need for and advantages and disadvantages of integrating the various Agency operation centers.

s. Work with COMIREX in evaluating system flows and the major alternatives throughout the collection tasking, processing, dissemination, and production cycle.

t. Identify equipment and facility requirements external to the EOI facility in terms of computers, video and communications data links in terms of EOI system users.

u. Study the nature of EOI data base requirements, their relation to other data systems, and the question of whether the various data systems should be fully integrated.

v. Serve as a focal point for interface during planning, design, and construction phases between system users and system designers and planners.

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ANNEX B

Staffing of EOI Study Group

1. Tentative planning is that the EOI Study Group would be a full-time staff of eight professionals and two clerk-steno positions reporting directly to the Deputy Director for Intelligence.
2. The staff would be located on the Ground floor where adequate space is available in Room
3. Personnel staffing should be based on ensuring a broad representation of the production interests of the DDI and DDS&T, as well as personnel well versed in imagery analysis. It is hoped that DDS&T will play an active role in the Study Group. If possible, it is hoped that DDS&T would provide representative from both OSI and FMSAC.
4. The interface between the EOI Study Group, the EOI system, and the community will be achieved by working in close collaboration with OSP and COMIREX.

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First-Phase Exploitation

First-Phase Exploitation is the preliminary, rapid interpretation of newly acquired imagery for the purpose of extracting, organizing, and communicating information to satisfy immediate priority needs.

Second-Phase Exploitation

Second-Phase Exploitation is the systematic review of newly acquired reconnaissance imagery for the purpose of providing a succinct, organized, and comprehensive summary of the information extracted, or available for extraction from the imagery obtained by a mission.

Third-Phase Exploitation

Third-Phase Exploitation is the exploitation in depth of reconnaissance imagery for the purpose of extracting and coherently organizing the accurate, detailed, and comprehensive information required in the production of intelligence.

Basic Intelligence Support Exploitation

Basic Intelligence Support Exploitation is that imagery interpretation effort which is undertaken to provide a flow of basic image-derived information required by more than one agency, department, or command. It is a step-by-step process of extracting and accumulating information from reconnaissance imagery. Basic Intelligence Support Exploitation involves and is limited to the derivation of information on each specific installation, object, activity, or search area examined. It requires the preparation of an authoritative base report which is augmented by information derived from subsequent First- and Second-Phase reporting and is updated periodically, or as required by appropriate authority, during Third-Phase Exploitation. Basic Intelligence Support Exploitation can be provided as a service of common concern and effectively programmed against the acquisition of all modes of reconnaissance imagery.

Direct Support Exploitation

Direct Support Exploitation is that imagery interpretation effort which is undertaken in direct and timely support of the assigned mission of an agency, department, or command. It is a dynamic "on demand" process in which directly subordinate imagery interpretation resources must be applied to meet the spectrum of intelligence needs of a higher authority which cannot be satisfied by Basic Support Exploitation. Direct Intelligence Support Exploitation thus is continuously oriented in support of the mission of an organization, rather than toward providing a flow of basic image-derived information from the imagery acquired by each successive reconnaissance mission. It is responsive to the changing needs of the higher authority being supported and can be effectively programmed only by that authority.